

AMENDMENTS TO THE CLAIMS

1. (Withdrawn) A method of bonding a conductive adhesive and an electrode together comprising:

coating a conductive adhesive containing a conductive filler and an organic binder on at least a surface of an electrode formed on a substrate; and

heating the conductive adhesive and the electrode under predetermined heating conditions so as to melt at least the surface of the electrode to form a fusion-bond between the surface of the electrode and the conductive filler; and

curing the organic binder contained in the conductive adhesive to electrically and mechanically bond the conductive adhesive and the electrode together.

2. (Withdrawn) The method of bonding a conductive adhesive and an electrode together according to Claim 1, wherein the organic binder comprises a thermosetting resin, and the act of heating the conductive adhesive and the electrode under predetermined heating conditions causes the surface of the electrode to be melted and fusion-bonded to the conductive filler contained in the conductive adhesive and causes the organic binder contained in the conductive adhesive to be thermally cured to bond the conductive adhesive and the electrode together.

3. (Withdrawn) The method of bonding a conductive adhesive and an electrode together according to Claim 2, wherein the surface of the electrode comprises a metal material which can be melted under the predetermined heating conditions.

4. (Withdrawn) The method of bonding a conductive adhesive and an electrode together according to Claim 3, wherein the surface of the electrode comprises a surface layer formed on a base of the electrode by plating, the surface layer having a lower melting point than the base of the electrode.

5. (Withdrawn) The method of bonding a conductive adhesive and an electrode together according to Claim 1, wherein the conductive filler contained in the conductive adhesive comprises scale-like conductive filler particles.

6. (Withdrawn) The method of bonding a conductive adhesive and an electrode together according to claim 5, wherein at least a portion of at least some of the scale-like conductive filler particles are located in the surface of the electrode after the completion of the act of heating.

7. (Withdrawn) The method of bonding a conductive adhesive and an electrode together according to claim 1, wherein the conductive filler is partially located within the surface of the electrode after the completion of the act of heating.

8. (Withdrawn) The method of bonding a conductive adhesive and an electrode together according to Claim 1, wherein the surface of the electrode and at least a portion of the conductive filler contained in the conductive adhesive are melted together.

9. (Withdrawn) The method of bonding a conductive adhesive and an electrode together according to Claim 1, wherein only a surface layer of the electrode is melted.

10. (Withdrawn) A method of bonding a conductive adhesive and a pair of electrodes together comprising the steps of:

coating the conductive adhesive containing a conductive filler and an organic binder on at least a first electrode formed on a surface of a first substrate;

adhering the conductive adhesive formed on the first electrode to a second electrode formed on a surface of a second substrate;

heating the conductive adhesive and the electrodes under predetermined heating conditions so as to melt the surfaces of the first electrode and second electrodes to form a fusion-bond between the surfaces of the first and second electrodes and the conductive filler contained in the conductive adhesive; and

curing the organic binder contained in the conductive adhesive to electrically and mechanically bond the conductive adhesive and the first and second electrodes together.

11. (Withdrawn) The method of bonding a conductive adhesive and a pair of electrode together according to Claim 10, wherein the organic binder comprises a thermosetting resin, and the act of heating the conductive adhesive and the electrodes under predetermined heating conditions causes the surfaces of the electrodes to be melted and fusion-bonded to the conductive filler contained in the conductive adhesive and causes the organic binder contained in the conductive adhesive to be thermally cured to bond the conductive adhesive and the electrodes together.

12. (Withdrawn) The method of bonding a conductive adhesive and a pair of electrodes together according to Claim 13, wherein the surface of each of the electrodes comprises a metal material which can be melted under the predetermined heating conditions.

13. (Withdrawn) The method of bonding a conductive adhesive and a pair of electrodes together according to Claim 12, wherein the surface of each of the electrodes comprises a surface layer formed on a base of the respective electrode by plating, the surface layer of each respective electrode having a lower melting point than the base of the respective electrode.

14. (Withdrawn) The method of bonding a conductive adhesive and a pair of electrodes together according to Claim 10, wherein the conductive filler contained in the conductive adhesive comprises scale-like conductive filler particles.

15. (Withdrawn) The method of bonding a conductive adhesive and a pair of electrodes together according to claim 14, wherein at least a portion of at least some of the scale-like conductive filler particles are located in the surface of each of the electrodes after the completion of the act of heating.

16. (Withdrawn) The method of bonding a conductive adhesive and a pair of electrodes together according to claim 10, wherein the conductive filler is partially located within the surface of the electrodes after the completion of the act of heating.

17. (Withdrawn) The method of bonding a conductive adhesive and a pair of electrodes together according to Claim 10, wherein the surface of each of the electrodes

and at least a portion of the conductive filler contained in the conductive adhesive are melted together.

18. (Withdrawn) The method of bonding a conductive adhesive and a pair of electrodes together according to claim 10, wherein only a surface layer of each of the electrodes is melted.

19 – 27. (Canceled)

28. (New) A bonded structure comprising:
a first substrate;
a first electrode formed on the first substrate;
a first low-melting-point material formed on the first electrode; and
an organic binder formed on the first low-melting-point material, the organic binder including a conductive filler, wherein at least a part of the conductive filler is present within the first low-melting-point material.

29. (New) The bonding structure according to claim 28 further comprising:
a second substrate;
a second electrode formed on the second substrate;
a second low-melting-point material formed on the second electrode and connected to the organic binder, wherein at least a part of the conductive filler is present within the second low-melting-point material.

30. (New) The bonding structure according to claim 28; wherein the first low-melting-point material comprises a Sn-Pb alloy.

31. (New) The bonding structure according to claim 29; wherein the first and second low-melting-point material comprise a Sn-Pb alloy.

32. (New) The bonding structure according to claim 28; wherein the conductive filler includes Ag.

33. (New) The bonding structure according to claim 29; wherein the conductive filler comprises Ag.

34. (New) The bonding structure according to claim 28; wherein the conductive filler comprises solder particles.